

CZECHOSLOVAKIA / Organic Chemistry. Synthetic Organic Chemistry.

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 77614.

Author : Arient, J. and Dvorak, J.

Inst : Not given.

Title : Triphenylmethane Dyes. II. The Introduction of a Triazole Group Into the Triphenylmethane Skeleton.

Orig Pub: Chem Listy, 52, No 1, 109-115 (1958) (in Czech).

Abstract: When $(p-(CH_3)_2 NC_6H_4)_2 CHC_6H_4 NH_2-p$ (I), obtained in 95% yields by the condensation of p-aminobenzaldehyde with dimethylaniline (II), is diazotized followed by alkalization with $CH_3 COONa$, reaction with β -naphthylamine (III) in neutral medium, stirring for 3 hrs, alkalini-

Card 1/9

CZECHOSLOVAKIA / Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 77614.

Abstract: zation with NaOH solution, stirring for 2 more hrs, and heating to reflux temperature, a 100% yield of $(p-(CH_3)_2 NC_6H_4)_2 CHC_6H_4 N \equiv NR-p$ is obtained in which R = 2-aminonaphthyl-1 (IV), mp 215-216° (from alcohol). The oxidation of IV with $(CH_3 COO)_2 Cu$ (refluxing for 2 hrs in pyridine solution) gives a 97% yield of $(p-(CH_3)_2 NC_6H_4)_2 CHC_6H_4 R'-p$ (V), where R' = α, β -naphthotriazoly-2, mp 212.5-215° (from benzene). The oxidation of a solution of the diazonium salt of I by 10% aqueous suspension of PbO_2 (15 min, 0-10°) in acid medium followed by precipitation of the Pb with dilute $H_2 SO_4$, filtration of the $PbSO_4$, addi-

Card 2/9

CZECHOSLOVAKIA / Organic Chemistry. Synthetic Organic Chemistry. J-2

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 77614.

Abstract: tion of CH_3COONa , reaction with III and treatment similar to that used in the case of IV, gives 94% yields of $(p-(\text{CH}_3)_2\text{NC}_6\text{H}_4)_2\text{C}(\text{OH})\text{C}_6\text{H}_4\text{N}=\text{NR}-p$ (VI), mp $202-204^\circ$ (decomp), which is purified by reprecipitation from acid solution or by precipitation from dioxane solution with water; as an alternate method precipitation with benzene from petroleum ether solution can be used. The oxidation of V with PbO_2 , followed by the salting out of the carbinol which is produced, refluxing of the latter in alcohol, dilution of the filtrate with water, and alkalization with NaOH yields 93% $(p-(\text{CH}_3)_2\text{NC}_6\text{H}_4)_2\text{C}(\text{OH})\text{R}'-p$ (VII, mp $179-179.5^\circ$, which is purified by precipitation with

Card 3/9

CZECHOSLOVAKIA / Organic Chemistry. Synthetic Organic G-2
Chemistry.

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 77614.

Abstract: C_6H_6 from petroleum ether. VII can also be prepared in 92% yields with the oxidation of VI by a procedure similar to that used in the preparation of V. The diazotization of 0.03 mol para-leucoaniline (VIII) in the presence of KBr, followed by reaction with 0.1 mol III and treatment similar to that used in the case of IV, give 96% yields of $(C_6H_5)_2CHN = NR''-p$ (purification as in the case of VII) which is oxidized by a procedure similar to that used with V to give 99% yields of $CH(C_6H_4R'-p)_3$ (IX), mp 206-208° (after drying for several days at 110° in vacuo); following precipitation from benzene solution by the addition of petroleum ether, IX is found to contain

Card 4/9

CZECHOSLOVAKIA / Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 77614.

Abstract: 1 mol C_6H_6 . By a procedure similar to that used in the preparation of VI, the diazotization of VIII, followed by oxidation with PbO_2 , and reaction with III yields 98% $HOC(C_6H_4N=NR-p)_3$ (purification as in the case of IX); the oxidation of the latter product for 4 hrs by the procedure used in the case of V results in a 94% conversion to $HOC(C_6H_4R'-p)_3$ (purification by chromatography on Al_2O_3). The acetylation of $(p-NH_2C_6H_4)_2CHC_6H_5$ (XI) (H. Weil and co-workers, Ber, 61, 1294 (1928)) by heating for 2 hrs with $(CH_3CO)_2O$ in CH_3COOH over a water bath, followed by

Card 5/9

CZECHOSLOVAKIA / Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 77614.

Abstract: the addition of 33% HCl, oxidation by PbO_2 (15 min), precipitation of the acetyl carbinol with water, and hydrolysis of the acetyl carbinol by heating for 10 min with (1:2) H_2SO_4 to 110-115° gives a 78% yield of p,p'-diaminotriphenylcarbinol (XII), mp 173-174° (from $\text{C}_5\text{H}_5\text{N}$). The reaction of diazotized XI with III gives a 100% yield of $\text{C}_6\text{H}_5\text{CH}(\text{C}_6\text{H}_4\text{N}=\text{NR-p})_2$, mp 159-161° (purification as for X); the oxidation of the latter product by the procedure used for V gives a 96% yield of $\text{C}_6\text{H}_5\text{CH}(\text{C}_6\text{H}_4\text{R}'\text{-p})_2$ (XIII), mp 149-151° (purification as for X). The reaction of diazotized XII with III gives an 86% yield of $\text{C}_6\text{H}_5\text{COH}(\text{C}_6\text{H}_4$

Card 6/9

CZECHOSLOVAKIA / Organic Chemistry. Synthetic Organic Chemistry.

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 77614.

Abstract: $N = NR-p)_2$, mp 118-122° (purification as for X); when the latter product is oxidized by a procedure similar to that used in the case of V, C_6H_5COH ($C_6H_4R'-p)_2$ (XIV) is obtained, mp 182-185° purification as for X). The reaction of diazotized p, p'-diaminodiphenylmethane with III gives 99% yields of $CH_2(C_6H_4N = NR-p)_2$, mp 224-225° (from o-dichlorobenzene); the product is dissolved in pyridine, and the solution is added over 8 hrs to a boiling solution of $(CH_3COO)_2Cu$ in pyridine, the mixture is poured into water giving a 96% yield of $CH_2(C_6H_4R'-p)_2$ (XVI) [sic], mp 314-316° (from o-dichlorobenzene). Attempts to oxid-

Card 7/9

CZECHOSLOVAKIA / Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khimiya, No 23, 1958; 77614.

Abstract: ize XV $\overline{\text{sic}}$ to the corresponding carbinol or to the benzophenone derivative were unsuccessful. Similarly the reaction of diazotized p, p'-diaminobenzophenone with III gives 98% yield of $\text{OC}(\text{C}_6\text{H}_4\text{N}=\text{NR-p})_2$, mp 275-276° (from o-dichlorobenzene); oxidation of the latter product by a procedure similar to that used with XV gives 94% $\text{OC}(\text{C}_6\text{H}_4\text{R}'\text{-p})_2$ (XVI) $\overline{\text{sic}}$, mp 318-319° (from o-dichlorobenzene). Attempts to effect the condensation of XVI with II in the presence of POCl_3 or to carry out a reaction of XVI with chlorobenzene in the presence of Na were unsuccessful. The above-described triphenylmethane derivatives containing the triazole ring when dissolved in organic

Card 8/9

CZ/8-52(82)-10-18/39

AUTHORS: Arient, J and Franc, J.

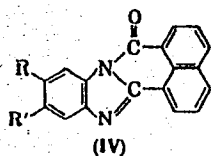
TITLE: Dyes Derived From Imidazole. I. (Imidazolová barviva.I) Preparation and Chromatographic Separation of Dyes From 1,4,5,8-Naphthalene Tetracarboxylic and 1,8-Naphthalene Dicarboxylic Acids (Příprava a chromatografické dělení imidazolových barviv z 1,4,5,8-naftalentetrakarbonové a 1,8-naftalendikarbonové kyseliny)

PERIODICAL: Chemické Listy, 1958, Vol.52(82), Nr.10, pp 1946-1950 (Czechoslovakia)

ABSTRACT: The authors repeated the synthesis of naphthoylene-bis-6, 6'-ethoxybenzimidazole and naphthoylene-bis- α,α' -naphthimidazole. The authors synthesised naphthoylene-6-ethoxybenzimidazole, naphthoylene- α -naphthimidazole and naphthoylene-peri-naphthimidazole. Properties of all these compounds are given in Table 1. By paper chromatography the authors succeeded in separating the dyes into their various components and to prove the formation of theoretically possible isomers (Table 2). From the colouration of the various isomers it was possible to conclude that the isomers with carbonyl groups in the 1 or 1-4 positions absorb on longer wave lengths than the isomers with carbonyl groups in the 8 or 1 and 5 position. The fluores-

Card 1/2

Dyes derived from imidazole. II. Monosubstitutedimidazole dyes derived from tetramines of the benzene series. J. Arignt and J. Marhan (Výzkum, ústav org. synth., Pardubice-Rybitví, Czech.). *Collection Czechoslov. Chem. Commun.* 25, 124-9 (1960) (in German); cf. *C.A.* 53, 11842e.—In contrast to Fr. 1,000,115 (*C.A.* 53, 8045a), condensation of 1,8-C₁₀H₆(CO₂H)₂ (I) with *sym*-C₆H₄(NH₂)₂ (II) tetra-HCl salt (III) gave IV (R = R' = NHAc) (IVa) and a



small amt. of IV (R = H, R' = NHAc) (V) and IV (R = H, R' = OAc) (VI). The unsubstituted 1,2-(1,8)-naphthoylenebenzimidazole, IV (R = R' = H) (VII), was obtained as one of the by-products in the condensation of I with 1,5-diamino-4,6-dinitrobenzene (VIII) followed by redn. of the nitro groups. Adding with agitation diazotized 76 g. sulfanilic acid and 60 ml. 15% aq. NH₃ (to keep the pH at 7-7.5) to 83.3 g. *N,N'*-bis(*p*-toluenesulfonyl)-*m*-phenylenediamine, 16 g. NaOH, 800 ml. H₂O, and 400 g. crushed ice, stirring the mixt. 1 hr., heating to 60°, acidifying with 100 ml. concd. HCl, filtering off the ppt., and washing with dil. aq. HCl gave a diazo dye (free of the monoazo compd. as shown by chromatography of its NH₂ salt on Whatman No. 1 paper with 1:1:1 AmOH-C₆H₅N-aq. NH₃); treating the dye portionwise at the b.p. (in 1000 ml. H₂O and 120 ml. 15% aq. NH₃) with 130 g. Na₂S₂O₄, filtering the ppt. hot, and washing with 200 ml. H₂O gave 67.3 g. 1,5-bis(*p*-toluenesulfonamido)-2,4-diaminobenzene, white tablets, m. 228° (EtOH). Dissolving this (44.65 g.) with agitation in 400 ml. 80% H₂SO₄, slowly heating the soln. to 140°, stirring 5 min., and keeping 1 day at room temp. gave lustrous

leaflets of 2H₂SO₄; the filtrate deposited after 3 days 4 white needles of 11.H₂SO₄. Treating the mixt. of the above sulfates with 200 ml. concd. HCl at 70° 10 min., filtering off the ppt., and reprecip. with concd. HCl from an aq. soln. gave 19.1 g. III. Boiling 16 hrs. 14.2 g. III, 200 ml. AcOH, and 21.6 g. I and cooling gave 29.2 g. brown ppt. which was washed with 30 ml. AcOH and boiled with 5 g. Na₂CO₃ and 250 ml. H₂O. Filtering while hot, washing with 100 ml. H₂O, and drying at 80° gave 18.7 g. brown, cryst. powder (acidification of the filtrate yielded excess I) which was chromatographed on Al₂O₃ (activity I). Successive elution

with PhNO₂, EtOAc, and 1:1 C₆H₅-cyclohexanol gave VI, V, and (as the chief product) IVa, purified by pptn. from the C₆H₅N soln. with petr. ether, yellow powder, insol. in CHCl₃, CCl₄, and CS₂, sol. in concd. H₂SO₄; infrared spectrum given. Adding portionwise 12 g. Fe powder and 5 ml. concd. HCl to a boiling mixt. of 200 ml. AcOH, 3 g. VIII, and 6.5 g. I, refluxing 16 hrs., filtering hot and working up gave 5.45 g. IVa, chromatographically identical with that obtained from III. Refluxing 2 hrs. 9.2 g. 2,4-(O₂N)₂C₆H₃NH₂, 10.8 g. I, and 150 ml. AcOH, adding portionwise 30 g. Fe powder and 5 ml. concd. HCl, refluxing 8 hrs., cooling, filtering off the paste, washing with hot aq. HCl and then hot aq. Na₂CO₃, and drying gave 3.25 g. brown powder; an addnl. 10.15 g. was obtained on pptg. the AcOH filtrate with H₂O. Chromatography of the combined product on Al₂O₃ (activity I) and elution with PhMe gave a yellow-brown compd., m. approx. 215° (constitution not detd.) and VI, yellow powder, m. 232-3° (purified by pptn. with petr. ether from the C₆H₅N soln.); successive elution with CHCl₃ gave V, orange powder, m. 205° (purified as VI). Chromatograms on Whatman No. 1 paper (elution with 3:1 cyclohexane-C₆H₅N) showed the following *R_f* values and colors of fluorescence: IVa 0.25, yellow; V, 0.45, yellow-orange; VI, 0.6, green; I, 0.75, violet; and VII, 0.85, yellow-green. A similar procedure was used to prep. the impure 7-Me deriv. of IVa from 3,5-bis(phenylazo)-2,6-diaminotoluene.

Jifi Pliml

ARIENT, JOSEF

✓ Benzoylation of pyrene. Josef Arient and Jiří Marhan.
Czech. 94,289, Feb. 18, 1960. BzCl 185 added to a soln. of
pyrene 101 in dry o-dichlorobenzene 650, the mixt. treated
with small regular doses of anhyd. AlCl₃ in the course of 1 hr.
(total 200) so that the temp. did not exceed 35°, the mixt.
stirred 5 hrs. until the temp. has dropped to 45° and then
12 addnl. hrs., the brown-red suspension poured into H₂O
500 and after the decompn. of AlCl₃ has ceased (spontane-
ous warming to 70-80°) the mixt. steam-distd. gave a yel-

3
JAS(WB)

low product, m. 130-40° of a mixt. of dibenzoylpyrenes
(1) 205 parts. I. were characterized by paper chromatog-
raphy. L. J. Urbánek

ARIENT, J.; MARHAN, J.; TAUBLOVA, H.

Imidazole dyes. III. Reaction of sym-tetraaminobenzene with carboxylic acid. Coll Cz Chem 25 no.6:1602-1611 Je '60. (EEAI 10:9)

1. Forschungsinstitut fur organische Synthesen, Pardubice-Rybitvi und Technische Hochschule fur Chemie, Pardubice.

(Imidazole) (Dyes and dyeing) (Amino group)
(Benzene) (Carboxylic acids)

MATRIKA, Miroslav; SAGNER, Zdenek; STERBA, Vojeslav; ARIENT, Josef

Decomposition mechanism of some basic triphenylmethane dyes in aqueous medium. Chem prum 11 no.11:574-577 N '61.

1. Vyzkumny ustav organickych syntez, Pardubice-Rybitvi.

ARIENT, J.; MARHAN, J.

Imidazole dyes. IV. Consensation of o-phenylenediamine with phthalan
hydride. Coll Cz chem 26 no.1:98-106 Ja '61.

(EEAI 10:9)

1. Forschungsinstitut fur organische Synthesen, Pardubice-Rybitvi.

(Imidazole)	(Dyes and dyeing)	(Phenylenediamine)
	(Phthalan)	

MATRKA, M.; NAVRATIL, F.; STERBA, V.; ARIENT, J.

Polographic determination of 2,2'-bis-pyrazoleanthrone in the presence of pyrazoleanthrone. Coll Cz Chem 26 no.7:1763-1767 J1 '61.

1. Organisch-technologisches Laboratorium I, Forschungsinstitut für organische Synthesen, Pardubice-Rybitvi.

(Anthrone) (Pyrazole)

ARIENT, J.; MARHAN, J.

Pyrene derivates. Part 2: Production of polycyclic quinones
from pyrenes. Coll Cz Chem 26 no.8:1941-1948 '61.

1. Forschungsinstitut fur organische Synthesen, Pardubice-
Rybitvi.

ARIENT, J.

SURNAME, Given Names

Country: Czechoslovakia

Academic Degrees: [not given]
Research Institute of Organic Synthesis (Forschungsinstitut
Affiliation: fuer organische Synthesen), Pardubice-Rybitvi

Source: Prague, Collection of Czechoslovak Chemical Communications,
Vol 26, No 11, November 1961, pp 2774-2780

Data: "Imidazole Dyes. VI. Synthesis and Properties of
1,2-Naphthoylbenzimidazole."

Authors:

✓ ARIENT, J
✓ MARHAN, J

2
KOUTECKÝ, J; ZAHRAĐNÍK, R; ARIENT, J.

Czechoslovakia

Institute of Physical Chemistry, Czechoslovak
Academy of Sciences -- Prague; Research
Institute of Organic Syntheses -- Pardubice-
Rybitví - (for all)

Prague, Collection of Czechoslovak Chemical
Communications, No 11, 1962, pp 2490-2513

"Study of the Relations between the Physical
Properties of Symmetrical Quinones and their
Structure on the Basis of the MO-ICAO Method."

KOUTECKY, J.; ZAHRADNIK, R.; ARIENT, J.

Examination of the relations between the physical properties of symmetrical quinones and their structure by the MO-LCAO method. Coll Cz Chem 27 no.11:2491-2515 N '62.

1. Institute of Physical Chemistry, Czechoslovak Academy of Sciences, Prague and Research Institute of Organic Syntheses, Pardubice - Rybitvi.

ARIENT, J.

CZECHOSLOVAKIA

ARIENT, J; MARHAN, J.

Research Institute of Organic Synthesis, Pardubice-
Rybitvi (for all)

Prague, Collection of Czechoslovak Chemical Communi-
cations, No 5, 1963, pp 1292-1300

"Imidazol Pains VII. Condensation of 1,8-Napthal
Acid with 1,2-Diaminobenzol Derivates."

CZECHOSLOVAKIA

ARIENT, J; HAVLICKOVA, L.

Research Institute of Organic Synthesis, Pardubice-Rybitvi
(for both)

Prague, Collection of Czechoslovak Chemical Communications,
No 7, 1963, pp 1885-1893

"Imidazol Paint VIII. Reaction of Substituted Phthalic
Acid Anhydrids with 1,2-Diaminobenzol."

ARIENT, J.

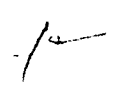
2
CZECHOSLOVAKIA

ARIENT, J; DVORAK, J; SNOBL, D.

Research Institute of Organic Synthesis (Forschungsinstitut
für organische Synthesen), Pardubice-Rybitvi (for all)

Prague, Collection of Czechoslovak Chemical Communications,
No 9, 1963, pp 2479-2489

"Imidazol Paint. X. On the Condensation of 2,6- and 2,7-
Dichloronaphthalene-1,4,5,8-Tetracarboxylic Acid with o-
Phenylenediamine."


CZECHOSLOVAKIA

ARIENT, J; HAVLICKOVA, L.

Research Institute of Organic Synthesis (Forschungs-
institut für organische Synthesen), Pardubice-Rybitvi
(for both)

Prague, Collection of Czechoslovak Chemical Communications,
No 9, 1963, pp 2534-2536

"Imidazol Paints XI. On the Condensation of Pyromellith
Acid with o-Phenylendiamin."

ARIENT, J.; MARHAN, J.

Imidazole dyes. Pt. 7. Coll Cz Chem 28 no. 5: 1292-1300
My '63.

1. Forschungsinstitut fur organische Synthesen, Pardubice-
Rybitvi.

ARIENT, J.; HAVLICKOVA, L.

Imidazole dyes. Pt.8. Coll. Cz Chem 28 no.7:1885-1894 J1 '63.

1. Forschungsinstitut für organische Synthesen, Pardubice-
Rybitvi.

ARIENT, J.; DVORAK, J.; SNOBL, D.; HAVLICKOVA, L.

Imidazole dyes. Pts. 10-11. Coll Cz Chem 28 no.9:2479-2490,
2534-2536 S '63.

1. Forschungsinstitut fur organische Synthesen, Pardubice-
Rybitvi.

ARIENT, J.; MARHAN, J.

Imidazole dyes. Pt. 12. Coll Cz Chem 28 no. 12:3352-3361
D '63.

1. Forschungsinstitut fur organische Synthesen, Pardubice-
Rybitvi.

ARIENT, J.; DVORAK, J.

Pyrene derivatives. Pt. 3. Chem prum 14 no.7:357-359 J1 '64.

1. Research Institute of Organic Syntheses, Pardubice-Rybitvi.

ARIENT, Josef

"Synthetic organic dyes and their intermediate products" by H.R. Schweitzer. Reviewed by Josef Arient. Chem prum 14 no.12:673-674 D '64

1. Research Institute of Organic Syntheses, Pardubice-Rybitvi.

ARIENT, J.; HAVLICKOVA, L.; SLOSAR, J.

Imidazole dyestuffs. Pt. 13. Coll Cz Chem 29 no.12:3115-3121 D '64.

1. Forschungsinstitut fur organische Synthesen, Pardubice-Rybitvi.

CZECHOSLOVAKIA

ARIENT, J; DVORAK, J; NEPRAS, M; KOKES, P.

Research Institute for Organic Synthesis, Pardubice-
Rybitvi - (for all).

Prague, Collection of Czechoslovak Chemical Communications,
No 11, November 1965, pp 3718-3729.

"Imidazol dyes. Part 15: Presentation of arolylenimidazol
dyes and the influence of substitution on their coloring
properties."

(4)

ARIENT, J.

CZECHOSLOVAKIA

STEDRA, V; ARIENT, J; NAVRATIL, F.

Research Institute for Organic Synthesis (Forschungsinstitut
für organische Synthesen), Pardubice-Rybitvi - (for both)

Prague, Collection of Czechoslovak Chemical Communications, No 1,
January 1966, pp 113-121

"Isidanal Cyas. Part 16: Nitration of methyl derivatives of
benzimidazol."

STERBA, V.; ARIENT, J.; SLOBAR, J.

CZECHOSLOVAKIA

Research Institute for Organic Synthesis (Forschungs-
institut für organische Synthesen), Pardubice-Hybitvi

Prague, Collection of Czechoslovak Chemical Communica-
tions, No 3, March 1966, pp 1093-1100.

"Imidazole dyes. Part 17: Nitration of 2-phenylbenzimi-
dazole and its nitro derivatives."

CZECHOSLOVAKIA

ZAHRADNIK, R; NEPRAS, M; ARIENT, J; KOUTECKY, J

I. Institute of Physical Chemistry, Czechoslovak Academy of Sciences, Prague (for Zahradnik and Koutocky); 2. Research Institute of Organic Syntheses, Pardubice-Rybitvi (for Nepras and Arient)

Prague, Collection of Czechoslovak Chemical Communications, No 3, March 1966, pp 1180-1188

"Imidazole dyes. Part 18: Electronic spectra and reactivity of imidazole dyes."

(4)

CZECHOSLOVAKIA

ARIENT, J; HAVLICKOVA; KNIZEK, J

Research Institute of Organic Syntheses, Pardubice-
Rybitvi - (for all)

Prague, Collection of Czechoslovak Chemical Communi-
cations, No 12, December 1966, pp 4682-4693

"Imidazol dyes. Part 19: On the reaction of 1,2-ben-
zoylene benzimidazole and 1,2-naphthoylene benzimidazole."

ARIENT, Jcsef; DVORAK, Jan; KOKES, Petr

Oxidation of naphthoylene-bis-benzimidazoles. Chem prum
13 no.5:245-246 My '63.

1. Vyzkumny ustav organickych syntez, Pardubice - Rybitvi.

EXCERPTA MEDICA Sec 16 Vol. 5/12 Cancer Sec. 57

4462. DIENSTBIER Z., ARIENT M. and KOFRÁNEK V. I. Clin. of Intern. Med., Charles Univ., Central Lab., Milit. Hosp., Prague; Dept. of Oncol., District Hosp., Ustí nad Labem *On the mechanism of early leukocyte changes in rats after extensive X-irradiation. IV. Influence of partial irradiation* Neoplasma 1957, 4/1 (15-20) Graphs 1 Tables 1

The total number of leucocytes in 2 groups of Wistar rats irradiated with 700 r. (200 kv.) on the head and chest, and on the abdomen, showed a significant decrease, both neutrophils and lymphocytes being affected. A third group of rats receiving the same dose to isolated intestines after laparotomy did not show this decrease, but rather a slight neutrophilia. A control group of laparotomized rats that received no radiation showed a marked neutrophilia. It is concluded that the extent and rate of decrease, particularly of lymphocytes, following X-irradiation are directly proportional to the size of the irradiated area and do not depend upon the site irradiated.

Cohen - Johannesburg

ARIENT, M.

DIENTSTBIER, Z.; ARIENT, M.

Mechanism of changes of leukocyte count following lethal roentgen irradiation. III. Effect of tissue homogenates. Cesk. fysiол. 6 no.1: 60-66 '57.

1. Technicka spoluprace: H. Spankova, M. Mlejnkova, I. Ploticova I. klinika chorob vnitřnich KU, Praha, UZL, UVN, Praha Statisticke zpracovani: V. Maly, Ustav pro organizaci zdravotnictvi KU, Praha.

(ROENTGEN RAYS, effects,

lethal dose on leukocyte count, eff. of tissue homogenates in rats (Cz))

(LEUKOCYTE COUNT, effect of radiations,

x-ray lethal dose, eff. of tissue homogenates in rats (Cz))

(TISSUE EXTRACTS, effects,

on-leukocyte count after lethal x-irradiation in rats (Cz))

PARIZEK, J.; ARIENT, M.; DIENSTBIER, Z.; SKODA, J.

Mechanism of post-irradiation desoxycytidinuria. Cesk. fysiол.
8 no.3:230 Apr 59.

1. Laborator pro fysiologii a patofysiologii premeny latek CSAV,
Vyzkumny ustav hygieny, epidemiologie a mikrobiologie, Fysikalni
ustav fak. vseob. lek. KU, Chemicky ustav CSAV, Praha. Predneseno
na III. fysiologickych dnech v Brne dne 15. 1.1959.

(NUCLEOSIDES AND NUCLEOTIDES, in urine,

desoxycytidine in x-irradiated animals (Cz))

(ROENTGEN RAYS, eff.

urinary desocycytidine in irradiated animals (Cz))

DIENSTBIER, Zdenek; KOFRANEK, Vladimir; BROUSIL, Jindrich; ARIENT, Miroslav (Technická spolupráce: J. Jasan, Statistické středisko MZd Praha)

Statistical studies on health and fertility of physicians working with ionizing radiations. Ces. rentg. 13 no.5:330-342 0 '59

(RADIATION EFFECTS)

(FERTILITY radiation effects)

(PHYSICIANS)

PAZIZEK, I.; ARIENT, M.; DIENSTBIER, Z.; SKODA, I.

Excretion of deoxycytidine in the urine after irradiation as
an early test for radiation injury. Med.rad. 5 no.3:31-38 '60.

(MIRA 13:12)

(DEOXYCYTIDINE)

(RADIATION SICKNESS)

ARIENT, M.; SKALA, E.; POTMESIL, M.; PALA, F.; DUFEK, V.

On the treatment of acute leukaemia by massive whole body
irradiation combined with subsequent bone marrow transfusion.
A case report. Neoplasma, Bratisl. 7 no.3:295-304 '60.

1. Military Institute of Hygiene, Epidemiology and Microbiology,
Central Military Hospital, Prague, Czechoslovakia.
(LEUKEMIA MYELOCYTIC radiother)
(BONE MARROW transpl)

DIENSTBIER, Z.; ARIENT, M.; POSPISIL, J.

Nonspecific post-irradiation leukocyte changes. Cas.lek.cesk 99
no.32-33:1007-1013 12 Ag '60.

1. Biofyzikalni ustav lebarske fakulty KU v Praze, Vojensky ustav
hygieny, epidemiologie a mikrobiologie v Praze, Veterinarni
vyzkumne stredisko v Praze.
(LEUKOCYTES radiation eff.)

FRIENT, M

- [illegible]

ARIENT, M.; KOVARIKOVA, H.; CIHAK, A.

Contribution to the determining the N-methyl-2-pyridone-5-carboxamide
in the urine of patients with malignant disease. Coll Cz Chem
27 no.7:1711-1714 JI '62.

1. Department of Clinical Laboratories, Central Military
Hospital Prague, and Institute of Organic Chemistry and
Biochemistry, Czechoslovak Academy of Sciences, Prague.

*

SMETANA, Karel; HERMANSKY, Frantisek; ARIENT, Miloslav

Studies on the ultrastructure of human eosinophilic leukocytes in peripheral blood. Cas. lek. cesk. 101 no.42:1265-1268 19 0 '62.

1. Laborator elektronove mikroskopie Vyzkumneho ustavu experimentalni terapie, reditel doc. dr. O. Smahel. Histologicky ustav fakulty vseobecneho lekarstvi KU v Praze prednosta akademik J. Wolf. Laborator pro patofyziologii jater a krvetvorby pri I. interni klinice KU v Praze, prednosta prof. dr. V. Hoenig. Hematologicke oddeleni Ustredni vojenske nemocnice, Praha-Stresovice.
(EOSINOPHILS)

Nuclear Medicine

CZECHOSLOVAKIA

UDC 612.111/.112.014.18-084

KOFRANEK, V.; POSPISIL, J.; DIENSTBIER, Z.; ARIENT, M.; Research Institute of Radiation Hygiene (Vyzkumny Ustav Hygieny Zareni), Prague; Biophysical Institute, Faculty of General Medicine, Charles University (Biofysikalni Ustav Fak. Vseob. Lek. KU), Prague, Chief (Prednosta) Prof Dr Z. DIENSTBIER; Department of Clinical Laboratories at the Central Military Hospital (Oddeleni Klinikychn Laboratori Ustredni Vojenske Nemocnice), Prague.

"Dynamics of Peripheral Blood Changes in Relation to Combined External Radiation and the Activation of Na^{24} in Rats. I. "

Prague, Casopis Lekaru Ceskych, Vol 106, No 8, 24 Feb 67, pp 201 - 210

Abstract [Authors' English summary modified]: Dynamics of peripheral changes of leucocytes, neutrophils, and lymphocytes in rats were investigated for 24 hours to 29 days following an irradiation by 25, 100, 600, and 1000 R of ionizing radiation from various sources. Lymphocytes are the cells most sensitive to irradiation. From the change in their numbers it is possible to determine what amount and what kind of irradiation (X-ray, gamma, neutrons) was applied. 6 Figures, 2 Tables, 57 References, 12 Czech, 4 USSR ref.

ARIESAN, Maria

GALEA, V.

RUMANIA

Professor

Bucharest, Farmacia, Revista a Uniunii Societatilor de Stiinte
Medicale din Republica Populara Romina, No 9, Vol X, Sep 62,
pp 531-533.

"Biochemical Changes in the Liver of White Rats under the Influence
of Synthetic Organic Dyes, Orange GGN and Amaranth."

Co-authors:

ARIESAN, Maria, Pharmacist.

LUPUTIU, Georgeta, Pharmacist.

GALEA, V.; ARIESAN, Maria; LUPUTIU, Georgeta

Biochemical changes in the liver of albino rats under the
synthetic organic dyes. Orange G.G.N. and amaranth. Rumanian
med. rev. 7 no.2:86-88 '63.

(LIVER) (BIOCHEMISTRY) (DYES)
(VITAMIN A) (GLUTATHIONE)

H-17

Country : ROMANIA
 Category : Chemical Technology. Pharmaceuticals. Vitamins
 Antibiotics
 Abs. Jour : Ref Zhur-Khimiya, No 14, 1959, No 50704
 Author : Mairovici, C.; Ariesan, V.
 Institute : -
 Title : Disinfecting Properties of the Quaternary
 Substance of Ammonia of the "Zephyrol" Type
 Orig Pub. : Farmacia (Romin.), 1958, 6, No 1, 29-36
 Abstract : Investigated were phenol numbers and bacteri-
 ological action of substances of the " Zephyrol
 type prepared from a raw material derived from
 local stearine. It is indicated that the syn-
 thesized substance was found to be a good
 antiseptic and may be widely used in surgery,
 gynecology, urology, for sterilization of
 gauges, and for surgical instruments.
 --A. Vavilova.
 Card: 1/1

H-17

Country : COMMUNIST CHINA
 Category : Chemical Technology. Pharmaceuticals. Vitamins.

ARIESAN, V.

SURNAME, Given Names

Country: Rumania

Academic Degrees:

Affiliation: -not given-

Source: Bucharest, Farmacia, Vol IX, No 8, Aug 1961, pp 449-463.

Data: "Drugs Influencing Synoptic Transmission."

Authors:

DANCIU, Felicia, -Pharmacist.-

ARIESAN, V., -Pharmacist.-

ANTONESCU, N.; COSTEA, L.; ARIESANU, C.

Some aspects of the development of combustion process in turbulent current. Studii cerc energet B 12 no.2:163-176 '62.

S/124/63/000/003/013/065
D234/D308

AUTHORS: Antonescu, N., Costea, L. and Ariesanu, C.

TITLE: Investigation of the process of burning in a tunnel burner of the vortex type

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 3, 1963, 45, abstract 3B239 (Studii si cercetări energ. Acad. RPR, 1962, v. B12, 163-176 (Rum.; summaries in Rus., Ger., Eng. and Fr.))

TEXT: The authors consider the data of an experimental study of the development of burning in an air tunnel burner of the vortex type with internal diameter 400 mm and length 750 mm. Liquid hydrocarbon fuel was used. Hydrodynamic characteristics of the regimes investigated (distribution of tangential velocities for a given flow rate) are compared with data obtained from the chemical analysis of the combustion products. /-Abstracter's note: Complete translation.-/

Card 1/1

ACCESSION NR: AR4015667

S/0081/63/000/021/0489/0489

SOURCE: RZh. Khimiya, Abs. 215108

AUTHOR: Arifdzhanov, A.; Starodubtsev, S. V.; Sultanov, A. S.

TITLE: Polymerization of acrylonitrile in solutions under the influence of gamma rays

CITED SOURCE: Sb. Fizika i khimiya prirod. i sintetich. polimerov. Tashkent, AN UzSSR, vy*p. 1, 1962, 143-148

TOPIC TAGS: acrylonitrile, acrylonitrile polymerization, dimethyl formamide, sodium rhodanide, potassium rhodanide, polymer transition depth, finished strand solution, gamma radiation, radiation polymerization

ABSTRACT: The polymerization of acrylonitrile was studied in aqueous solutions of K, Na and NH_4 rhodanides, as well as in dimethyl formamide, in order to obtain finished strand solutions. Total transformation can be attained during polymerization in such solutions (at doses of 4000 rad), but the solutions cannot be used directly for spinning in view of their low specific viscosity. The value of $[\eta]$ does not vary with the degree of transformation. Polymerization in mixtures of dimethyl formamide and water (up to 25%) does not lead to increased values of characteristic

Card

146
VISCOSITY ($[\eta]$ - 0.30). P. Rhodanides Kiy-

TOPIC TAGS: additive, polymerization, acrylonitrile, gamma ray, nitro,
ammonium persulfate, hydrogen peroxide, hydroquinone, toluene, carbon tetrachloride,
sulfur, acetic acid, dimethylformamide, azodiisobutyronitrile, pyrogallol,
hexachlorethane

ABSTRACT: It was the aim of this study to produce highly viscous solutions appropriate for spinning. Commercial acrylonitrile was treated twice with a 10% aqueous solution, distilled water, washed with distilled water, dried over CaH₂, and distilled again. Next, 50% solutions of acrylonitrile were mixed with 1 to 5 volumes of dimethylformamide, mixed with 0.5% solutions of ammonium persulfate, hydrogen peroxide, hydroquinone, toluene, pyrogallol, carbon tetrachloride, nuxachloride, free sulfur, and dimethylformamide solution of acetic acid. Each

Card 1/3

NY 33331-65

ACCESSION NR: AF5005262

[illegible]

ASSOCIATION: Institut ispol'zovaniya topliva (Institute of Fuel Association)

SUBMITTED: 23Jul63

DECL: 01

212 213 214 215

NO R&F SOV: 003

OTHER: 002

Card 2/3

COLLECTION NR: AP5-05262

ENCLOSURE

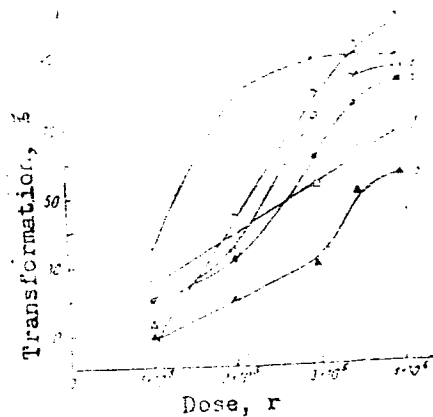


Fig. 1. Degree of transformation as function of the dose of gamma rays

Additives: 1- 0.2 g of CCl₄; 2- 0.05 g of C₆Cl₆; 3- toluene (5% of monomer weight); 4- 0.2 g of pyrogallol; 5- 0.12 g hydroquinone; 6- 0.1 ml of 10% solution of acetic acid

Card 3/3

SULTANOV, A.S.; AZERBAYEV, I.N.; SAFAYEV, A.S.; ARIFDZHANOV, A.

Production of ethyl formate on calcium phosphate. Vest. AN
Kazakh. SSR 20 no.8:24-32 Ag '64.

(MIRA 17:11)

ARIFDZHANOV, A.; SAFAYEV, A.S.; SULTANOV, A.S.

Production of ethyl formate by the esterification of formic acid and ethyl alcohol on aluminum phosphates. Dokl. AN Uz. SSR 21 no.9:33-36 '64. (MIRA 19:1)

1. Institut ispol'zovaniya topliva Gosudarstvennogo neftekhimicheskogo komiteta pri Gosplane SSSR.

ARIFDZHANOV, A. A.

ARIFDZHANOV, A. A. -- "Some Indexes of Vascular Reactivity in Patients with Hypertonic Disease under Hot-Climate Conditions." Tashkent State Medical Inst imeni V. M. Molotov. Tashkent, 1955.
(Dissertation for the Degree of Candidate in Medical Sciences)

SO: Knizhnaya Letopis', No 1, 1956

ARIFDZHANOV, I.I., aspirant

Diffusion of Oxyuris among children and adolescents in Tashkent.
Med.zhur.Uzb. no.11:81-82 N '58. (MIRA 13:6)

1. Iz kafedry obshchey gigiyeny (zav. - prof. S.N. Bavadzhanov)
Tashkentского gosudarstvennogo meditsinskogo instituta.
(TASHKENT--OXYURIASIS)

ARIFDZHANOV, I.I., aspirant

Rare case of a combination of the rat tapeworm with the dwarf tapeworm in children. Med. zhur. Uzb. no.8:80 Ag '60. (MIRA 13:9)

1. Iz kafedry obshchey gigiyeny (zav. - prof. S.N. Babadzhanov)
Tashkentskogo gosudarstvennogo meditsinskogo instituta.
(TAPEWORMS)

KUDRYAVTSEV, G.A.; ARIFDZHANOV, K.A.

Producing formolvaccine against colibacillosis in sheep (lambs).
Uzb. biol. zhur. no.3:70-73 '59. (MIRA 12:11)

1. Uzbekskiy nauchno-issledovatel'skiy veterinarnyy in sheep (lambs).
(Escherichia coli) (Vaccines) (Sheep--Diseases and pests)

AKHMEDBABAYEV, M.Kh.; ARIFDZHANOV, K.A.; BELOUSOV, N.A.; BELYAKOV, S.P.;
ZOTOV, V.G.; ISAYEVA, Z.D.; MAKHMUDOV, I.A.; ISHCHENKO, F.S.;
KRASIL'NIKOV, Ya.A.; NIKOL'SKIY, I.P.; NETSETSKIY, A.M.;
PERGAT, F.F.; PAVLOVSKAYA, M.D.; SAMSONOV, L.S.; POLIZHAYEV,
A.I.; SMIRNOV, F.Ye.; SABININ, M.N.; SHUTYAYEV, N.A.; CHIZHIK,
V.I.; KARPENKO, P.M.; IMEROV, A.I.

Mikhail Aleksandrovich Nenetskii; obituary. Veterinariia 37
no.10:94 0 '60. (MIRA 15:4)
(Nenetskii, Mikhail Aleksandrovich, 1899-1960)

ARIFZHA, CV, R.A.; NIKIFINA, R.Ye.

Discovery of *Critidia hyalomae* (O'Sarrell, 1913) in the tick
Hyalomma a. anatolicum (Koch, 1844). Zool. zhur. 40 no. 1:20-
24 Ja '61. (MIRA 14:2)

1. Institute of Veterinary, Uzbek Academy of Agricultural
Sciences, Tashkent.
(Tashkent Province--Protozoa) (Parasites--Ticks)

ARIFDZHANOV, K.A., kand. veterinarynykh nauk

Problem of typifying the virus of foot-and-mouth disease.

Trudy Uz.nauch.-issl.inst.vet. 14:35 '61.

(MIRA 16:2)

(Foot-and-mouth disease)

ARIFDZHANOV, K.A., kand.veterinarnykh nauk

Types of the foot-and-mouth disease virus in Uzbekistan. ~~Tr~~
Uz.nauch.-issl.inst.vet. 14:7-8 '61. (MIRA 16:2)
(Uzbekistan--Foot-and mouth disease)

LI, P.N.; ARIEDZHANOV, K.A.

Methods and prospects for the control of Hemosporidia infection
of cattle in Uzbekistan. Trudy Uz.nauch.-issl.inst.vet.
14:125-134 '61. (MIRA 16:2)

(Uzbekistan--Hemosporidia)
(Uzbekistan--Cattle--Diseases and pests)

ARIFDZHANOV, K.A., otv. red.

[Materials of the Scientific Industrial Conference on the Problems of Helminthology] Materialy Nauchno-proizvodstvennoi konferentsii po problemam gel'mintologii. Samarkand, Nauchno-issl. veterinarnyi in-t, 1963. 153 p.

(MIRA 17:7)

ARIFDZHANOV, K.A., kand.veterin.nauk; BOKOV, V.F., mladshiy nauchnyy sotrudnik

Azidine against piroplasmosis and Francisella infection in cattle.
Veterinariia 40 no.7:19-20 J1 '63. (MIRA 16:8)

1. Uzbekskiy nauchno-issledovatel'skiy veterinarnyy institut.
(Azidine) (Piroplasmosis) (Cattle--Diseases and pests)

LEBEDEV, P.T.; USOVICH, A.T.; CHEPUROV, K.P., prof.; KAL'CHENKO, M.M., aspirant; MATUSEVICH, V.F., doktor veterin. nauk; STEN'KO, A.S., mladshiy nauchnyy sotrudnik; LAKHMYTKINA, A.N., aspirant; GRISHCHENKO, N.F.; ORLOV, A.I., veterinarnyy vrach (Arkhangel'skaya obl.); PROSTYAKOV, A.P., kand. biolog. nauk; KOVYNDIKOV, M.S., kand. veterin. nauk; ARIFDZHANOV, K.A., kand. veterin. nauk

Veterinary experiments. Veterinariia 41 no.4:101-111 Ap '64.
(MIRA 17:8)

1. Sibirskiy nauchno-issledovatel'skiy veterinarnyy institut (for Lebedev, Usovich). 2. Poltavskiy sel'skokhozyaystvennyy institut (for Chepurov, Kal'chenko). 3. Ukrainskiy nauchno-issledovatel'skiy institut zemledeliya (for Matusevich, Sten'ko, Lakhmytkina). 4. Chernigovskaya oblastnaya veterinarnaya laboratoriya (for Grishchenko). 5. Ukrainskiy nauchno-issledovatel'skiy institut eksperimental'noy veterinarii (for Prostyakov, Fortushnyy, Kovyndikov). 6. Uzbekskiy nauchno-issledovatel'skiy veterinarnyy institut (for Arifdzhanov).

ARIFDZHANOV, K.A., kand. veter. nauk

Chemical prevention of piroplasmosis and *Françaiella*
infection using azidin. Veterinariia 41 no.11:42-44
N '64.

(MIRA 18:11)

1. Uzbekskiy nauchno-issledovatel'skiy veterinarnyy
institut.

ARIFDZHANOV, K.A., kand. veter. nauk; TAGI-ZADE, S.I., kand. veter. nauk;
RAKHIMOV, I.Kh., nauchnyy sotrudnik; ISTAMOV, I.I., nauchnyy
sotrudnik

Biochemical changes in blood in piroplasmosis under the effect
of azidin. Veterinariia 41 no.10:37-39 O '64.

(MIRA 18:11)

1. Uzbekskiy nauchno-issledovatel'skiy veterinarnyy institut.

IBRAGIMOV, Z.S.; ARIFDZHANOV, M.Kh.; AKHMEDOV, P.U.

Prospects for finding oil and gas in the rocks of the Upper
Jurassic carbonate formation of Shargun and adjacent regions.
Uzb. geol. zhur. 9 no.3:20-24 '65. (MIRA 18:8)

1. Institut geologii i razvedki neftyanykh i gazovykh metorozhdeniy
Gosudarstvennogo geologicheskogo komiteta SSSR.

ARIFDZHANOV, M. Kh.; DEMIDOVA, M. I.

Relationship between sulfur and bitumen in the sediments of the Upper Jurassic carbonate formation in the southwestern spurs of the Gissar Range. Uzb. geol. zhur. 6 no.5:17-25 '62.
(MIRA 15:10)

1. Institut geologii i razrabotki neftyanykh i gazovykh mestorozhdeniy AN Uzbekskoy SSR.

(Gissar Range—Sulfur) (Gissar Range—Bitumen)

ARIFDZHANOV, M. Kh.

Bitumen content and distribution in the Upper Jurassic carbonate formation of the southwestern spurs of the Gissar Range. Uzb. geol.zhur. 6 no.1:49-56 '62. (MIRA 15:4)

1. Institut geologii i razrabotki neftyanykh i gazovykh mestorozhdeniy AN UzSSR.

(Gissar Range--Bitumen--Geology)

ARIFDZHANOV, M.Kh.; AKHMEDOV, P.U.

Some data on the fracturing of the rocks of the Upper Jurassic carbonate formation in the Gaurdak uplift. Uzb. geol. zhur. 7 no.6:83-90 '63. (MIRA 17:8)

1. Institut geologii i razrabotki neftnyanykh i gazovykh mestorozhdeniy AN UzSSR.

BAYMUKHAMEDOV, Kh.N.; ZAKIROV, T.Z.; ARIEDZHANOV, T.Kh.; KURBANOV, A.S.

Geology and conditions governing the distribution of
mineralization of some gold-ore deposits in Uzbekistan.
Uzb. geol. zhur. 7 no.3:11-18 '63. (MIRA 16:11)

1. Tashkentskiy politekhnicheskiy institut.

ARIFHODZIC, S.

How to harmonize contractual relations between the railroad transportation enterprise and other railroad enterprises. p. 125.
ZELENICE. Vol. 11, No. 4, April, 1955. Belgrad.

SOURCE: East European Accessions List, (EEAL) Library of Congress,
Vol. 4, No. 12, Dec. 1955.

ARIFHODZIC, S.

ARIFHODZIC, S. Premiums as a result of reduced costs. p. 419.

Vol. 11, No. 12, Dec. 1955

ZELEZNICE

TECHNOLOGY

Beograd, Yugoslavia

So: East European Accessions, Vol. 5, May 1956

ARIFHODZIC, S.

Reporting the work on and the costs of railroad rails. p. 16.
(Zeleznice. Vol. 13, no. 1, Jan. 1957, Yugoslavia)

SO: Monthly List of East European Accessions (EEAL) ^CLS, Vol. 6, no. 7, July 1957, Uncl.

ARIFKHANOV, K.T.

Dynamics of growth and seasonal accretion in the representatives of
the genus Robinia L. during juvenile years. Uzb.biol.zhur.
no.6:7-16 '61. (MIRA 15:2)

1. Botanicheskiy sadAN U~~S~~SR.
(Locust (Tree))

ARIFKHANOV, U. Kh. Cand Tech Sci -- (diss) "Study of the process of isolation of fibers from soaked basts of gambo hemp." Mos, 1956. 12 pp (Min of Higher Education USSR. Mos Textile Inst), 100 copies (KL, 44-57, 100)

ARIFKHANOV, U.Kh.

Efficiency of moving parts of the TMM-200-K machine. Sbor.nauch.-
issl. rab. TTI no.4:85-91 '57. (MIRA 11:9)
(Textile machinery) (Bast)

ARIFKHANOV, U.Kh.

Investigating the process of separating soaked bast fibers derived
from hemp. Sbor. nauch.-issl. rab. TTI no.4:92-100 '57.

(MIRA 11:9)

(Textile machinery) (Bast)

MARKOV, Valentin Vasil'yevich; SUSLOV, Nikolay Nikolayevich; TRIFONOV, Vadim Georgiyevich; ANDREYEV, V.V., retsenzents; ARIFKHANOV, U.Kh., retsenzents; ARNO, A.A., retsenzents; DERBENEV, S.I., retsenzents; SHUSHKIN, A.A., retsenzents; MAKIYEV, V.S., nauchnyy red.; DUKHOVNIY, F.N., red.; SHAPENKOVA, T.A., tekhn. red.

[Primary processing of bast fibers] Pervichnaya obrabotka ~~biarykh~~ volokon. Moskva, Gos. izd-vo "Rostekhzdat," 1961.
463 p. (MIRA 15:4)

(Textile fibers)

(Textile machinery)

83718

S/056/60/038/004/011/048
B019/B070

24.6600

AUTHORS: Arifkhanov, U. R., Makarov, M. M., Perfilov, N. A.,
Shamov, V. P.

TITLE: Production of Fragments Under the Action of 100-Mev Protons

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,
Vol. 38, No. 4, pp. 1115-1122

TEXT: The authors have investigated the fragment production of the nuclei of a photoemulsion. The emulsion used was of type П-9 (γ) (P-9 (ch)), which allowed the observation of the charged products of nuclear fragmentations, and a visual study of the multiply charged particles with $Z \geq 3$, of α particles, or protons. The experiments were carried out at the synchrocyclotron of the OIYaI (Joint Institute of Nuclear Research). Fig. 1 shows the experimentally observed fragment production cross section as function of the photon energies for heavy and light nuclei. Fig. 2 shows the reduced probability for the departure of fragments from a heavy nucleus as a function of the number of prongs of a star. In the fragmentation of Ag and Br, the following fragments

Card 1/2

ALEKSEYEV, N.V.; ARIFKHANOV, U.R.; VLASOV, N.A.; DAVYLOV, V.V.;
SAMOYLOV, L.N.

Neutron polarization in the reactions $T(p, n)He^3$ and $D(d, n)He^3$.
Zhur. eksp. i teor. fiz. 45 no.5:1416-1424 N '63. (MIRA 17:1)

L 14933-63

EWI(m)/BDS AFETC/ASD DM

ACCESSION NR: AP3003979

s/0089/63/015/001/0062/0064

AUTHORS: Alekseyev, N. V.; Arifkhanov, U. R.; Vlasov, N. A.; Danylov, V. V.; Samoylov, L. N.

TITLE: Apparatus for the study of polarization of fast neutrons

SOURCE: Atomnaya energiya, v. 15, no. 1, 1963, 62-64

TOPIC TAGS: fast neutron, neutron polarization, neutron scattering, He

ABSTRACT: The cyclotron laboratory of the Institute for Atomic Energy is planning to study polarized neutrons in the energy range from 5 to 40 mev. The paper describes the apparatus assembled for this purpose, and the results of neutron polarization measurements from the reaction $T(p,n)He^3$ conducted with this apparatus. For the analysis of polarized neutrons, their scattering on He^4 under 123F was used. Helium pressure was 100 atm., scintillations from Alpha particles were recorded with a photomultiplier; the scattered neutrons - with scintillation counters. The coincidence of both counts registered the events of neutron-Alpha scattering. For elimination of geometrical asymmetry, a solenoid was used which rotated the polarized neutrons by 90 degrees. The neutron polarization was found to be 28.6 plus or minus 4.1% for proton energy of 10.5 mev. incident under 40F. A detailed

DESCRIPTION OF APPARATUS IS GIVEN IN A PREPRINT OF THE INSTITUTE FOR ATOMIC ENERGY

Card 1/2

ACCESSION NR: AP4043612

S/0056/64/047/002/0433/0438

AUTHORS: Alekseyev, N. V.; Arifkhanov, U. R.; Vlasov, N. A.;
Davy*dov, V. V.; Samoylov, L. N.

TITLE: Polarization of neutrons in the reaction $T(d, n)He^3$

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 2, 1964, 433-438

TOPIC TAGS: neutron reaction, polarization, deuteron scattering,
tritium, alpha particle reaction

ABSTRACT: This is a continuation of earlier research with He^3 (ZhETF v. 45, 1416, 1963) and is aimed at attaining polarized neutrons of higher energy than in the past. The energies of the incident deuterons ranged from 9 to 19 MeV and analysis was by means of scattering from a gaseous helium scintillator connected for a coincidence circuit with two neutron counters. To exclude the effects of geometrical asymmetry, the neutron spin was turned through 90° in the

Card 1/5

ACCESSION NR: AP4043612

longitudinal magnetic field of a solenoid, with the reversal of the scattering direction from left to right and vice versa being produced by reversing the direction of the current in the solenoid. The polarization of the neutrons in the reaction $T(d, n)He^4$ at a laboratory angle close to 30° exceeds 50% over a wide range of deuteron energies, so that strongly polarized neutrons with energy up to 40 MeV can be produced by this reaction. Resonance effects previously observed upon variation of the cross section of the reactions $T(d, n)He^4$ in the ground and 20-MeV excited states, as well as in dT scattering, were also observed in the present results. These resonance effects must be taken into account in the phase shift analysis of the α -n scattering, and are connected with the excited states of the He^5 nucleus (16.7 and 20 MeV). "The authors are grateful to S. P. Kalinin and N. I. Venikov for interest in the work and for ensuring operation of the cyclotron, and also V. A. Kovtun and V. A. Stepanenko for preparing the tritium targets." Orig. art. has: 4 figures and 1 table.

Cord 2/5

ACCESSION NR: AP4043612

ASSOCIATION: None

SUBMITTED: 02Mar64

ENCL: 02

SUB CODE: NP

NR REF SOV: 003

OTHER: 014

Card. 3/5

ACCESSION NR: AP4043612

ENCLOSURE: 01

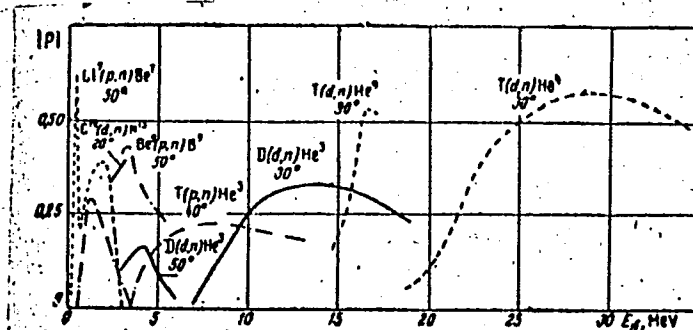
Summary data on neutron polarization

E_d , MeV	θ_{lab} , град	E_n , MeV	θ_{lab} , град	ϵ , %	P_n , %	P_{p} , %
	lab. deg.					
8,7 $\pm$ 0,7	30	24,7	123	36,0 $\pm$ 2,6	67,2	53,7
11,0 $\pm$ 0,6	30	26,9	123	38,0 $\pm$ 3,6	69,7	54,5
11,7 $\pm$ 1,0	30	27,5	123	39,2 $\pm$ 2,3	74,0	53,0
12,2 $\pm$ 0,5	30	28,0	123	43,0 $\pm$ 3,4	75,0	58,6
13,1 $\pm$ 0,0	30	28,8	123	45,3 $\pm$ 3,0	76,2	59,5
15,4 $\pm$ 0,9	30	30,0	123	41,4 $\pm$ 4,2	80,3	51,6
17,3 $\pm$ 0,8	30	32,6	123	37,5 $\pm$ 4,3	82,5	45,5
19,0 $\pm$ 0,8	15	35,9	123	4,1 $\pm$ 5,1	84,6	4,8
19,0 $\pm$ 0,8	30	31,1	123	30,5 $\pm$ 4,4	83,1	44,0
19,0 $\pm$ 0,8	45	31,4	123	15,6 $\pm$ 3,2	70,6	10,6
19,0 $\pm$ 0,8	73	25,2	123	12,6 $\pm$ 5,9	68,0	18,5
19,0 $\pm$ 0,8	92	21,1	123	-12,2 $\pm$ 10,3	58,8	-20,7
19,0 $\pm$ 0,8	30	34,1	103	13,4 $\pm$ 6,5		
19,0 $\pm$ 0,8	30	34,1	135	38,2 $\pm$ 6,6		
19,0 $\pm$ 0,8	30	34,1	145	36,3 $\pm$ 4,8		

Card 4/5

ACCESSION NR: AP4043612

ENCLOSURE: 02



Neutron polarization in different nuclear reactions

Card 5/5

L 13763-65 EWT(m)/EWA(h) AFNL/SSD/ESD(t)

ACCESSION NR: AP4044581

S/0053/64/083/004/0741/0752

AUTHOR: Alekseyev, N. V.; Arifkhanov, U. R.; Vlasov, N. A.;
Davy*dov, V. V.; Samoylov, L. N.

TITLE: Sources of polarized fast neutrons //

SOURCE: Uspekhi fizicheskikh nauk, v. 83, no. 4, 1964, 741-752

TOPIC TAGS: neutron polarization, deuteron bombardment, proton
bombardment, neutron counter, nucleon scattering

ABSTRACT: This is a state-of-the-art review devoted primarily to
sources of fast polarized neutrons (FPN) of medium energy (up to
35 Mev). The history of FPN research and some of the problems that
can be solved with its aid are briefly reviewed. Along with men-
tioning various methods for polarization measurements and comparing
their advantages and disadvantages, the authors describe the in-
stallation used for this purpose at the Institut atomnoy energii im.

1/5

L 13763-65
ACCESSION NR: AP4044581

Kurchatova, in which a Hillman solenoid (P. Hillman et al., Nuovo Cimento v. 6, 67, 1956) is used to rotate the nucleon spin through 90° in a magnetic field. Installations of this type can measure simultaneously the polarization of neutrons in a wide spectral range. Another method especially mentioned is the polarization analysis based on electromagnetic (Schwinger) neutron scattering. Various proton-neutron and deuteron-neutron reactions that yield polarized neutrons are analyzed from the point of view of their efficacy as polarized neutron sources. Although the number of reactions investigated so far is small, the production of neutrons with polarization in excess of 20% is now feasible at energies of 0.3-35 Mev, and it is hoped that the $T(d,n)He^4$ reaction can be made to produce PFN with higher energies. Orig. art. has: 10 figures and 1 formula.

ASSOCIATION: None

2/5

A 13763-65
ACCESSION NR: AP4044581

SUBMITTED: 00

0
ENCL: 02

SUB CODE: NP

NO REF SOV: 014

OTHER: 031

3/5

L 13763-65
ACCESSION NR: AP4044581

ENCLOSURE: 01

0

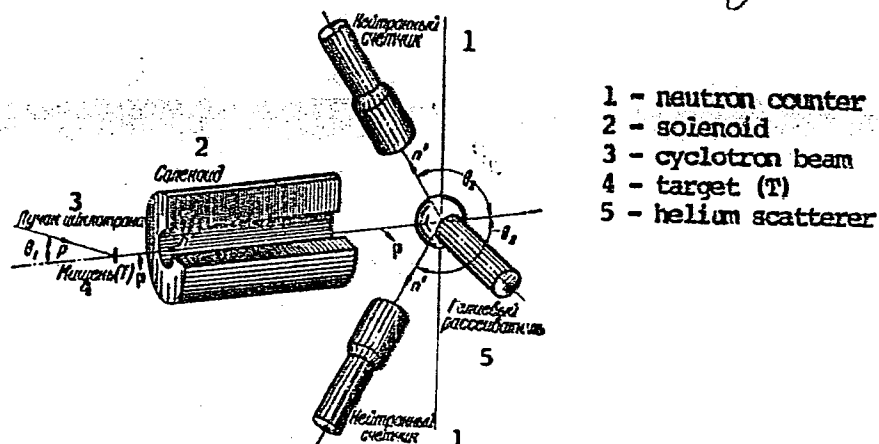


Fig. 1. Diagram of setup for the measurement of fast-neutron polarization

Card 4/5

L 13763-65
ACCESSION NR: AP4044581

ENCLOSURE: 02

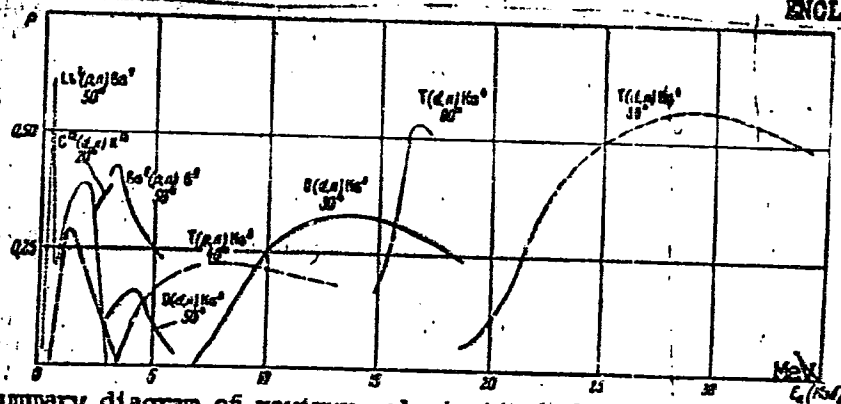


Fig. 2. Summary diagram of maximum polarization of neutrons from various investigated sources.

Card 5/5

L 2738-66 EWT(m)/T/EWA(m)-2
ACCESSION NR: AP5024334

UR/0367/65/002/002/0239/0242

AUTHOR: Arifkhanov, U. R.; Vlasov, N. A.; Davydov, V. V.; Samoylov, L. N.

TITLE: Polarization in $n\alpha$ -scattering at neutron energies of 25, 28 and 34 Mev

SOURCE: Yadernaya fizika, v. 2, no. 2, 1965, 239-242

TOPIC TAGS: neutron scattering, nuclear scattering, alpha particle, proton scattering, neutron polarization, proton polarization

ABSTRACT: The asymmetry of $n\alpha$ -scattering for 45 to 150° is measured for the case of neutrons with energies of 25 ± 1.25 , 27.8 ± 0.9 and 34 ± 0.75 Mev. The neutrons were produced in the $T(d, n)He^4$ reaction at an angle of 30° with deuteron energies of 9.1 ± 1.3 , 12.0 ± 1.0 and 19.0 ± 0.8 Mev. The results are compared with the angular relationship of polarization in pn -scattering, interpolated to the same proton energies from the available data for other energies (21.9, 28.8 and 40 Mev). Satisfactory agreement is found between the angular relationships of asymmetry in $n\alpha$ - and pn -scattering, and both relationships show identical divergence from the predictions of phase analysis extrapolated from the energy region below 20 Mev. The polarization in $n\alpha$ -scattering is roughly estimated on the basis of agreement

Card 1/2